

CLAIMS

What is claimed is:

1. A method for detecting a target nucleic acid in a sample, comprising the step of amplifying the target nucleic acid using a polymerase chain reaction, wherein said polymerase chain reaction is carried out in the presence of an effective amount of at least one anti-foam reagent that does not substantially inhibit the action of the polymerase.
2. The method according to claim 1, wherein said polymerase chain reaction is a quantitative polymerase chain reaction.
3. The method according to claim 2, wherein said polymerase chain reaction is a reverse transcriptase polymerase chain reaction
4. The method according to claim 1, further comprising detecting the product of said polymerase chain reaction by optical detection.
5. The method according to claim 4, comprising detecting said product using a probe labeled with a detectable label.
6. The method according to claim 5, wherein said detectable label is a fluorescent dye.
7. The method according to claim 4, comprising detecting said product using a fluorescent nucleic acid-binding dye.
8. The method according to any of claim 1, wherein said polymerase chain reaction is carried out in the presence of an effective amount of at least two anti-foam reagents.
9. The method according to claim 1, wherein said anti-foam agent is selected from the group consisting of 1520-US, AF, FG-10, O-30, SE-15, and Antifoam B.

10. The method according to claim 8, wherein said at least two anti-foam reagents are selected from the group consisting of 1520-US, AF, FG-10, O-30, SE-15, and Antifoam B.

11. A composition for amplifying a target nucleic acid, comprising  
(a) at least one primer molecule that hybridizes to the target nucleic acid;  
(b) nucleotide triphosphates  
(c) a thermostable DNA polymerase  
(d) a detergent; and  
(e) an effective amount of at least one anti-foam reagent that does not substantially inhibit the action of said thermostable DNA polymerase.

12. A composition according to claim 11, comprising at least two anti-foam reagents.

13. A composition according to claim 11 wherein said anti-foam agent is selected from the group consisting of 1520-US, AF, FG-10, O-30, SE-15, and Antifoam B.

14. The composition according to claim 12, wherein said at least two anti-foam reagents are selected from the group consisting of 1520-US, AF, FG-10, O-30, SE-15, and Antifoam B.

15. The method according to claim 1 wherein said polymerase chain reaction is carried out in a sample chamber of a device comprising a plurality of said sample chambers.

16. The method according to claim 15, wherein each of a plurality of said sample chambers of said device contains reagents suitable for detecting a target nucleic acid.

17. The method according to claim 16, wherein a plurality of sample chambers of said device contains reagents suitable for detecting different target nucleic acids.

18. The method according to claim 17, further comprising detecting the amplified products in said sample chambers by optical detection.

19. The method according to claim 18, comprising detecting said amplified products using a probe labeled with a detectable label.

20. The method according to claim 19, wherein said detectable label is a fluorescent dye.

21. The method according to claim 18, comprising detecting said amplified products using a fluorescent nucleic acid-binding dye.